

2035 IS AN UNREALISTIC GOAL

President Biden's goal of achieving zero-carbon electricity by 2035 faces huge obstacles, which make the goal unrealistic. Here is a sample of concerns about the goal and some of the obstacles to achieving it.

Edison Electric Institute (EEI)

- *"I think the 2035 date ... would be an incredibly difficult situation to handle for most of the companies in the industry."* Tom Kuhn, President, EEI

American Public Power Association (APPA)

- *"We think a more realistic standard would be more of a 2050 carbon-neutral goal ... and even that would be hard."* Joy Ditto, President, APPA

National Rural Electric Cooperative Association (NRECA)

- *"We don't think that 80 per cent by 2030 or zero by 2035 are realistic timelines ... Those timelines in our view are too aggressive and would jeopardize both reliability and affordability."* Louis Finkel, Senior Vice President of Government Relations, NRECA

American Electric Power

- *"I think 2035 is particularly aggressive ... If we move too quickly, we could jeopardize the reliability of the grid ... Our analysis says we could get there by 2050."* Nick Akins, Chairman, President and CEO, American Electric Power
- *"We don't have the technologies today that we need to get to net-zero ... So, 2035, that becomes even harder."* Lisa Barton, Executive Vice President and COO, American Electric Power

Duke Energy

- *"When we get beyond, let's say, 70% and we're trying to get to 80% or 90% to 100%, we begin looking for a technology that does not exist at commercial scale today. So, as I think about the president's goal of getting there by 2035, the timeline is going to be very dependent on whether those new technologies are not only viable ... but ready to go to commercial scale at a price that can attract private capital."* Lynn Good, Chair, President and CEO, Duke Energy

U.S. Chamber of Commerce

- *"The problem with that is that's a big bet on technology that doesn't exist yet ... We don't have the technologies to decarbonize the electricity sector let alone the economy. No regulatory program is going to change that."* Christopher Guith, Senior Vice President, U.S. Chamber of Commerce's Global Energy Institute

Federal Energy Regulatory Commission (FERC)

- *“West Virginia has a generating fleet that is 90% coal and if West Virginia is forced during the transition that we are going through to prematurely retire that fleet, you have a reliability problem ... [and] you have a cost problem because that fleet has to be replaced and West Virginia consumers have to pay for that. Most of those generating units are in rate base and that means if you shut them down, West Virginians are going to pay for them for years to come even though they are not operating. We are going through a transition to a lower carbon future, and everybody wants to go there, but as we go through this transition reliability should not be compromised and consumers should not be exploited.”* Commissioner Mark Christie.

North American Electric Reliability Corporation (NERC)

- *Referring to the risks of the changing electricity mix, “I want to be clear; this is not a call against the transition, but rather a plea for attention to the pace of change and the challenges created for system operators.”* James Robb, President and CEO, NERC

State Utility Commissioners

- *“A timeline to decarbonize the electric grid by 2035 is extremely aggressive ... This aggressive timeline means a lot of cost increases to consumers. It’s also going to have a lot of impact on our land use in the country. We’re going to see a lot more transmission lines going up. A lot more generation going up around the country. And siting of those things is very controversial, very costly, and it takes a long time. And so, I’m afraid that this deadline of 2035 was put out there well before any research was actually done to figure out how will we get there.”* Commissioner Ellen Nowak, Wisconsin Public Service Commission
- *“The people who have signed onto that [2035] goal ... [are] taking their direction from an energy expert named Harry Potter. It simply cannot be done. It’s not a simple task. It’s an enormously complicated and expensive task.”* Commissioner Tony O’Donnell, Montana Public Service Commission

Grid Operators

- *“In transmission terms, 2035 is like tomorrow ... It feels challenging to me.”* Jennifer Curran, Vice President of System Planning & Chief Compliance Officer, Midcontinent Independent System Operator
- *On the grid’s need for fossil fuels over the next 10 years: “What we have are what we’ve referred to as balancing resources: those resources that are there to help when either the wind isn’t blowing, or the sun isn’t shining ... It’s going to take a while to get to a point where renewable resources are providing most of that baseload service.”* Ann George, ISO-NE spokesperson

Energy Experts

- *“Building out the required new sources of power generation, the transmission infrastructure to interconnect that generation, and grid-sited flexibility resources to balance intermittency could require up to \$2.5 trillion by 2035. The additional cost to*

upgrade distribution grids, expand and reinforce transmission networks, and invest in downstream applications would increase costs even further. These costs may ultimately be borne by end customers and taxpayers, though the allocations of cost have yet to be determined and require further study.” McKinsey & Company (global management consulting firm)

- “The US goal of a net zero power sector by 2035 is one of the most ambitious decarbonisation targets globally and one of the most difficult to implement ... In short, we think achieving a net zero US power sector by 2035 will be extremely challenging. Based on our understanding of technologies, market policies, the challenges of quickly building transmission lines and the electrification of energy, we believe that 66% clean generation by 2035 is more feasible.” Wood Mackenzie (global research and consulting firm)
- “Construction of new transmission requires an extensive siting and permitting process that can stretch for over a decade and may put the goal of a carbon-free electric grid by 2035 out of reach.” Belfer Center for Science and International Affairs, Harvard Kennedy School
- “Achieving electric sector targets beyond 80% requires deployment of emerging low-carbon technologies, including natural gas or bioenergy with CCS, advanced nuclear, and long-duration storage such as hydrogen produced from electrolysis ...” To achieve a carbon-free goal, “Wind and solar additions reach nearly 900 GW of new capacity and provide around 65% of generation by 2035. Firm capacity to balance renewables is provided by existing hydro, 160 GW of nuclear (roughly half existing and half new), plus around 280 GW of hydrogen-fired capacity (fueled by 130 GW of electrolysis).” Electric Power Research Institute
- “Achieving clean energy goals may require doubling or even tripling the size and scale of today’s U.S. transmission system ... The pace and scale of transmission development may be insufficient to build out a long-haul, high-voltage transmission grid capable of integrating renewable resources as they continue to dominate power supply additions.” ScottMadden (international management consulting firm)
- “I doubt [decarbonizing the electricity sector by 2035] is practical ... You just can’t put up that many windmills that fast. And there may not be that many places to put windmills ... Is this administration going to issue rules that override the states? Will the Supreme Court approve them? How many years will that take?” Philip Verleger, Energy Analyst and Author
- “The pace of wind and solar isn’t going fast enough to meet the 2035 target ... But even if it was, there would also have to be contributions from new technologies like batteries, carbon capture and storage, nuclear or hydrogen.” Tom Rowlands-Rees, Head of Research, BloombergNEF

Wall Street

- “It’s just physically impossible to build enough infrastructure in the next decade to reach some of the high-level policy goals that people are talking about ... The key threat is that too much investment too fast would raise customer bills more than customers

might be willing to spend.” Travis Miller, Equity Strategist, Morningstar Research Services

- “Grid expansion can be a hornet’s nest of cost, complexity, and NIMBYism ...” JP Morgan Asset and Wealth Management

Labor

- “We support the transition to renewable energy but disagree with arbitrary numbers that don’t take into account our current energy mix and energy needs ... 2050 is certainly better than 2035.” Yvette Pena O’Sullivan, Executive Director, Laborers International Union of North America
- “Where are you going to develop all these technologies, for example solar and all of that? You need, like, football fields. Has anyone driven around L.A. lately? There are no football fields of empty space. And if there were they’d put a football field there.” International Brotherhood of Electrical Workers Local 18 Business Manager Brian D’Arcy
- “We will not support policies that accelerate the closure of coal plants. The closures are already happening more rapidly than communities can deal with and are leaving economic devastation behind them.” Lee Anderson, Director of Government Affairs, Utility Workers Union of America
- “Just think about this for a moment ... The 2035 net zero emissions would eliminate not only coal, but it would also eliminate natural gas. The idea that we would be using, as a country, renewable and renewables only – A, I don’t think that’s possible. B, I don’t think that’s pragmatic. And C, it would be devastating to the economy in Appalachia ...” Cecil Roberts, President, United Mine Workers of America

Afterthought

Replacing the existing electricity supply — which has evolved over many decades — too quickly with massive amounts of renewable power, battery storage, and other technologies would make our electricity supply less reliable, less resilient, and more expensive. Those who want to decarbonize the grid should keep in mind the old adage “going slowly doesn’t prevent arriving.”

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